

CS Q-LEAP[™] SINE with APS 129 calibration system with air bearing vibration exciter

	HERO [™] vibration controller incl. signal conditioners	 Typical DUT heavy seismic sensor (seismometer) seismic simulation for components geophone for structure/building 	
	CS Q-LEAP [™] software sine calibration sine sweep vibration measurement vibration generation more on demand	vibration measurement	
	APS 129 air bearing vibration exciter	 Standards ISO 16063-21: Calibration of vibration transducers by comparison to a reference transducer ISO 17025: General requirements for the competence of testing and 	
[()]	Power amplifier PA 500 DM	 a calibration laboratories DIN 45669: Sensors for measurement of vibration immission 	

🖈 🛛 Key features

	Frequency range DC200 Hz
MMI NMI	Traceable to PTB (German National Metrology Laboratory)
-6-11	Calibration of vibration sensors, seismic sensors and geophones
	Integrated sensor database
	Integrated software for the generation of calibration certificates (print, PDF,) Easy data exchange with applications like ERP systems or measuring equipment databases

😥 Technical data

CS Q-LEAP[™] SINE calibration system with APS 129 air bearing vibration exciter

Frequency range	DC200 Hz	
Stroke(peak-peak)	158 mm (6.25 inch)	
Force (sine peak)	133 N (30 lbf)	
Operation	horizontal or vertical	
Payload, max.	horizontal: 23.0 kg (50.7 lb) vertical: 11.0 kg (24.3 lb)	
Table size	254 × 254 mm (10 × 10 inch)	

Frequency range			Expanded measurement uncertainty ¹⁾
from	to	Max. recommended payload	magnitude ²⁾ / phase ³⁾ of transfer coefficient
0.2 Hz	< 1 Hz	23 kg	1.5 % / 1.5°
1 Hz	16 Hz		1.0 % / 1.0°
> 16 Hz	160 Hz	20 kg	2.0 % / 2.0°
Reference frequencies: 8 Hz or 16 Hz for calibration according to DIN 45669			1.0 % / 1.0°

Recommended excitation amplitudes (peak values)

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Minimum	0.2 Hz 160 Hz: 0.01 m/s²	
Maximum (high payload)⁴) (displacement, velocity, acceleration)	50 mm in the range of 0.2 Hz1.25 Hz 3 m/s ² in the range of 1.25 Hz25 Hz 3 m/s ² 4 m/s ² in the range of 25 Hz160 Hz	
Maximum (low payload) ⁵⁾ (displacement, velocity, acceleration)	50 mm in the range of 0.2 Hz1.25 Hz 0.4 m/s in the range of 1.25 Hz6 Hz 15 m/s ² in the range of 6 Hz25 Hz 15 m/s ² 2 m/s ² in the range of 25 Hz160 Hz	

1) Only in combination with optional extra PHASE

2) Determined according to GUM (JCGM 100 "Evaluation of measurement data - Guide to the expression of uncertainty in measurement") with k = 2 (coverage factor) for the best possible device under test (DUT). Other devices that are not assumed as ideal must be evaluated with individual contributions.

3) Values only valid for electrical sensor signals \geq (1 mV or 1 pC)

4) Maximum acceleration for maximum payload (DUT)

5) Maximum acceleration without any payload (DUT)